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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,689	11/06/2003	Vinay Mehta	FDN-2815	8995
7590 02/04/2010 GAF MATERIALS CORPORATION Attn: William J. Davis, Esq. Legal Department, Building No. 10 1361 Alps Road Wayne, NJ 07470			EXAMINER COLE, ELIZABETH M	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 02/04/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/702,689

**Applicant(s)**

MEHTA ET AL.

**Examiner**

Elizabeth M. Cole

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,9,12,16-29 and 36-42 is/are pending in the application.
- 4a) Of the above claim(s) 19-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-5,9,12,16-18,36-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

1. Claims 1-5, 9 12, 16-18, 36-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed does not provide support for the claimed structure of a breathable thermoplastic film comprising a thermoplastic polyurethane blended with about 40-60% ethylene methacrylate polymer. The specification does not provide support for the claimed values of 40-60%. The specification does not mention a percentage for the ethylene methacrylate polymer which is blended with polyurethane.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 9, 12, 16-18, 36-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/37668 in view of Corzani et al, U.S. Patent Application Publication No. 2003/0194566. WO '668 discloses a roofing underlayment comprising a water vapor permeable layer bonded to a fabric layer such as a nonwoven fiber glass. The vapor permeable layer can be more than one layer and therefore meets the limitation of claim 3, in that the structure is unclear other than that a second vapor permeable layer is recited. See page 7 which teaches at least one functional, (breathable), layer and therefore teaches more than one functional layer. The water

vapor permeable layer can comprise copolyether ester, polyurethane or copolyether amide. See page 7, fourth full paragraph. The substrate layer can be a fiberglass layer. See page 8, fourth full paragraph. The vapor permeable layer can have a thickness of greater than 2 mils. See page 9, first full paragraph. The combination of the permeable layer and the fibrous substrate layer has a thickness of 0.4 mm which is about 15 mils, and therefore the permeable layer would apparently meet the thickness requirements set forth in claims 9 and 12. WO '668 differs from the claimed invention because it does not teach blending an adhesion promoter into the vapor permeable layer and does not teach further adding water repellant, algacide, herbicide antifungal, surface friction agent, flame retardant or coloring dye. Corzani teaches blending an additional component into the breathable layer of a roofing underlayment comprising thermoplastic polymeric layers in order to improve the bonding of the breathable layer to other layers. The additive can include ethylene vinyl acetate grafted with maleic anhydride, (paragraph 0032), or ethylene methyl methacrylate based copolymers. See paragraphs 0032-0034. The composition may further comprise antioxidants, pigments, UV stabilizers, etc. See paragraph 0051. The compositions comprising the blend have better bond strengths. See paragraph 0055. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the adhesion promoters or improvers taught by Corzani as well as the additives such as pigments, etc., in the breathable layer of WO '668, in order to improve the bonding strength of the composition of WO '668. It is noted that Corzani also teaches film thickness within the claimed ranges. See paragraphs 0068-0069. The composition can

be bonded with various fibrous substrates, (paragraph 0079), has a MVTR of at least 100 g per square meter per 24 hours, (paragraph 0084), and is useful in roofing materials, (paragraph 0096). With regard to the particular amounts claimed, it would have been obvious to have selected the amounts of adhesion promoters through the process of routine experimentation which produced the optimum bonding of the laminate material.

4. Applicant's arguments filed 10/16/09 have been fully considered but are not persuasive.
5. Paragraph 0042 of the instant specification provides sufficient support for the tie layer components being blended with the breathable layer because it teaches including the bonding agent within the polymerization process during the formation of the breathable thermoplastic film.
6. Applicant argues that the combination of WO '668 and Corzani does not provide a reasonable amount of guidance to arrive at the claimed blend which comprises 40-60% ethylene methacrylate polymer. However, since Corzani teaches employing the ethylene methacrylate polymer as an adhesion promoting additive with polyurethane breathable films, the person of ordinary skill in the art would have been able to select the optimum amount of ethylene methacrylate polymer which produced the best adhesion in the laminate.
7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

The examiner's supervisor Rena Dye may be reached at (571) 272-3186.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

/Elizabeth M. Cole/  
Primary Examiner, Art Unit 1794

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